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December 2, 1998

RECEIVED  
DEC - 2 1998  
FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Magalie Roman Salas  
Secretary  
Federal Communications Commission  
TW-A325  
445 Twelfth Street, S.W.  
Washington, D.C. 20554

Re: CC Docket Nos. 96-45 and 97-160

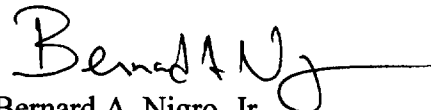
Dear Ms. Salas:

On behalf of GTE Service Corporation attached herewith is the originally signed affidavit of Frank J. Murphy, which was referenced in the cover letter dated November 30, 1998, for the Emergency Motion for Disclosure of Data and Information to Permit Public Review and Extension of Time filed pursuant to Section 1.41 of the Commission's rules.

Kindly date-stamp the additional, marked copy of this cover letter and return it in the envelope provided.

Should you require any additional information, please contact the undersigned.

Sincerely,



Bernard A. Nigro, Jr.  
Attorney for  
GTE SERVICE CORPORATION

BAN:maj  
Enclosure

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List A B C D E

**Affidavit of Francis J. Murphy  
on behalf of GTE Service Corporation**

FRANCIS J. MURPHY, being duly sworn, deposes and says:

1. I am the founder and president of Network Engineering Consultants, Inc. In this capacity, I have analyzed and evaluated telecommunications costing methodologies and models in universal service fund and unbundled network element proceedings. I have also authored expert reports and provided expert testimony on engineering and cost analysis of cost models filed in state and federal dockets.
2. During the past two years, I have analyzed extensively the various versions of the HAI Model (previously called the Hatfield Model), the Benchmark Cost Proxy Model ("BCPM") and, more recently, attempted to analyze the Hybrid Cost Proxy Model ("HCPM").
3. On November 18, 1998, the FCC's Fifth Report and Order ("Order") in CC Docket Nos. 96-45 and 97-160, FCC 98-279, was published in the Federal Register. In the Order, the FCC adopted a synthesized platform for the cost proxy model that will be used to estimate non-rural carriers' forward-looking cost to provide universal service. The synthesized platform purportedly contains the "best elements" of the three proxy models under consideration by the Commission.
4. In order to fully and completely analyze a cost model, one needs access to the database, algorithms and underlying methodologies. The FCC's cost model platform ("FCC Model") was released to the public without the data and documentation required to analyze the assumptions and algorithms contained in the Model. As a result, while it is possible to

conclude that the FCC Model is defective, it is impossible to determine how and why it fails to operate as described in the Order and is incapable of producing reasonable forward-looking costs for purposes of determining universal service fund support levels. For example, while keeping all other inputs constant, when we reduce the input for the "per-trunk equivalent investment in switch trunk port at each end of a trunk" from \$100 to \$1, which obviously should reduce the total central office switch investment, the switch investment output from the model actually increases.

5. A fundamental flaw of the FCC Model is that it does not contain any actual customer location data, which is required in order to run the Model and analyze its results. Throughout this docket, GTE has attempted to obtain the customer location data used or relied on by the cost model sponsors, and has not been successful to date. On July 27, 1998, the FCC issued a Protective Order that should have provided parties with the opportunity to review the raw geocoded data essential to the operation of the FCC Model (or the HAI Model).<sup>1</sup> This data was specifically cited in the FCC's Protective Order arrangement as data that was to be available to the parties via the Protective Order process. Despite the Protective Order, AT&T, MCI and PNR have all steadfastly refused to provide the raw geocoded data that would in theory enable GTE to operate and evaluate the FCC Model. To date, the FCC likewise has not made this information available to the interested public.

6. The FCC is anticipating that geocoded data will be available for use in the FCC Model, and has in fact deferred the selection of a database to the inputs phase of this

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<sup>1</sup>Protective Order, Before the Federal Communications Commission, CC Docket Nos. 96-45 and 97-160, July 27, 1998.

proceeding.<sup>2</sup> The geocoded data, as utilized by the FCC Model is in fact a preprocessing step and not a user-adjustable input value. This was an accepted fact in the discussions and litigation on how the HAI model used the geocoded data. There was no challenge to the fact that this data and the customer location module were a preprocessing part of the HAI platform. Customer location data files, geocoded or not, are probably the most essential element of any telecommunications network cost model. Once determined to be a viable and appropriate source, these files should not be considered or treated as user adjustable inputs. Without actual state and company customer location data that has been determined to be viable and appropriate, further analysis of any cost model may be inconclusive. The lack of access to either PNR's raw geocoded data, or any other source of geocoded input data, renders the FCC Model insusceptible to meaningful evaluation. Absent such data, it is impossible for the Commission or the parties to come to a reasonable conclusion as to the viability of the FCC Model.

7. In Appendix A of the Fifth Report and Order the FCC adopted the HAI geocoded customer dataset as "the current default data source for customer locations."<sup>3</sup> This default data has not been made available. The only raw geocoded data to which the FCC has provided access is the fictitious data for the state of Maryland. Needless to say, GTE is unable to perform a meaningful analysis using a cost model that contains only fictitious data for a territory in which it does not operate. For example, GTE wants to determine whether or not reasonable loop lengths are being produced by the FCC Model. GTE wants to

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<sup>2</sup>Fifth Report and Order at Par. 34.

<sup>3</sup>Fifth Report and Order at Appendix A Par. 8

examine whether the Model is producing a reasonable distribution network as well as feeder network. These types of analyses, which are fundamental to any cost model evaluation, cannot be performed on the FCC Model until a viable customer location database consisting of actual company data is available to the parties.

8. The fictitious data contained in the Model cannot be used as input data to either the HAI or BCPM Model. Hence, GTE is unable to determine if the FCC Model is operating as described in the Order or producing accurate costs for GTE's territories. As a result, the FCC Model cannot be compared to any of the cost models from which it is derived.
9. The lack of model documentation is another roadblock that inhibits GTE in evaluating the FCC Model. It is unclear to the user exactly what assumptions and algorithms are contained in the FCC Model. Documentation has not been provided that fully explains the engineering assumptions and standards that are the basis for the FCC Model, thus making it impossible to determine if the network modeled complies with engineering design standards. Model developers have also failed to provide documentation with respect to how the different modules interface with each other, thereby making it impossible to determine if assumptions and algorithms are consistent from module to module.
10. It is clear from a review of the HAI Scenario Inputs Worksheet that HCPM input data is not passed to the HAI switch and expense modules. (In fact, the resulting FCC Model necessitates that the user has to create and manage two sets of input tables without a clear understanding of how these inputs effect the Model's results.) Indeed, from the limited analysis that we have been able to perform, it appears that the FCC Model is not consistent from module to module. For example, the investment for loop plant is reduced by sharing

fractions once in the HCPM module and a second time in the expense module. These inconsistencies evidence significant defects in the FCC Model.

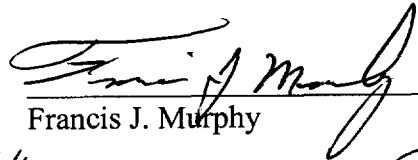
11. The lack of actual customer location data and the inability of the user to discern the underlying assumptions and engineering design criteria contained in the FCC Model render it unable to produce results that can be validated. In order to perform a meaningful validation, GTE must be provided customer location data for a significant portion of its serving area.
12. In addition, GTE must be provided the documentation necessary that allows it to determine if the engineering design criteria contained in the FCC Model are consistent with the design criteria that govern the construction of its network and therefore its costs. For example, when run with the default settings, the FCC Model does not appear to adhere to any known T1 on copper based architecture. Copper-based T1 transmission to a non-optical DLC site is an outdated technology. This design is no longer used by the majority of ILECs or the companies represented by the Rural Utilities Service when constructing new network facilities.
13. In the Fifth Report and Order, the FCC states that it believes that, "the federal platform is available for use by states, other interested policymakers, and the public."<sup>4</sup> Unfortunately, this belief is not accurate. In reality, GTE cannot run the FCC Model in any one of the more than two dozen states in which it operates.
14. The lack of model documentation and the inability of the user to analyze model

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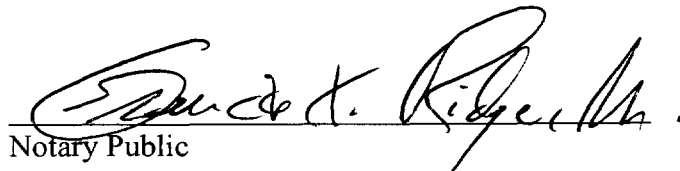
<sup>4</sup>Fifth Report and Order, Par. 92.

assumptions and algorithms make it difficult, if not impossible, to determine if the FCC Model complies with nine of the ten criteria set forth in the FCC's *Universal Service Order* and the directives set forth in the Fifth Report and Order. It is clear, even given the limited ability to evaluate the Model, that it does not comply with criterion number eight which dictates that "all underlying data should be verifiable, engineering assumptions reasonable, and outputs plausible."<sup>5</sup>

I declare under penalty of perjury that the foregoing is true and correct. Executed on November 30, 1998.

  
Francis J. Murphy

Subscribed and sworn to before me on this 30<sup>th</sup> day of November, 1998 in Stoughton, Massachusetts.

  
Notary Public

Commonwealth of Massachusetts 11-30-98  
Norfolk, S.S. Date 11-30-98  
Then personally appeared the above named Francis J. Murphy  
and acknowledged the foregoing instrument to be his/her  
free act and deed, before me,  
Francis X. Ridge, Jr., Notary Public  
My commission expires June 4, 2004

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<sup>5</sup>FCC First Report and Order, May 8, 1997, Paragraph 250.